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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,466	05/29/2001	David Bongfeldt	9-15000-7US	3736

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EXAMINER

NGUYEN, DUC M

ART UNIT	PAPER NUMBER
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2685

DATE MAILED: 07/09/2004

Handwritten number 9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/865,466

Applicant(s)

BONGFELDT, DAVID

Examiner

Duc M. Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5, 14-19, 27-31, 40-45 and 53 is/are rejected.
7) ☒ Claim(s) 6-13, 20-26, 32-39, 46-52 and 54-68 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This action is in response to applicant's response filed on 6/4/04. Claims 1-68 are now pending in the present application. **This action is made final.**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims **1-2, 4-5, 14-19, 27-28, 30-31, 40-45, 53** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Odate et al (US 4,776,032)**.

Regarding claim **1**, **Odate** discloses an automatic gain control method for a repeater in which a spillover signal from the transmitter antenna to a receiver is cancelled (see Figs. 12-13 and col. 7, lines 10-55), this would include all the claimed limitations, wherein the detector 50 would read on the "narrowband detector", the VGA amplifier 40 would read on the gain controller, controller 16 would read on the digital controller. Although **Odate** fails to disclose the controller is the digital controller, it is noted that the use of such a digital controller is well known in the art. Therefore, it would have been obvious to one skilled in the art to modify the above teaching of Odate for providing a digital controller as claimed, for utilizing advantages of digital controllers such as low cost, light weight.

Regarding claim **2**, it is rejected for the same reason as set forth in claim 1 above. In addition, it would have been obvious to configure the repeater with the full duplex capability in order to simultaneously process respective first and second RF signals as claimed, for utilizing a two-way repeater while minimizing delays in transmission relays.

Regarding claim **4**, it is rejected for the same reason as set forth in claim 2 above. In addition, it is clear that each wideband signal path would inherently comprise a bandwidth as claimed.

Regarding claim **5**, it is rejected for the same reason as set forth in claim 2 above. In addition, since the bandwidth is mostly allocated in accordance with FCC regulations, it would have been obvious to select a bandwidth of 25 MHz for compliance with FCC regulation in a particular region.

Regarding claim **14**, it is rejected for the same reason as set forth in claim 1 above. In addition, **Odate** discloses a synthesizer as claimed (see Fig. 12, ref. 52), an input as claimed (see input signal from the direction coupler 13 to the mixer 46 in Fig. 12), a mixer 46, a signal isolator as claimed (see IF filter 48 in Fig. 12) and a detector unit 50 as claimed.

Regarding claim **15**, it is rejected for the same reason as set forth in claim 14 above. In addition, **Odate** discloses a synthesizer with the adaptive function as claimed (see Fig. 12, ref. 52 and col. 7, lines 19-23).

Regarding claim **16**, it is rejected for the same reason as set forth in claim 14 above. In addition, since the use of a switch for switching an input signal between the

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transmit path and the receiving path is known in the art (Official Notice), it would have been obvious to one skilled in the art to modify the above teaching of Odate for providing a switch as claimed, so that the repeater can be used in a two-way repeater system.

Regarding claim **17**, it is rejected for the same reason as set forth in claim 14 above. In addition, it is clear that the IF filter would attenuate a portion of the RF sample signal lying outside the narrow pass-band as claimed.

Regarding claim **18**, it is rejected for the same reason as set forth in claim 2 above. In addition, since the bandwidth is mostly allocated in accordance with FCC regulations, it would have been obvious to select a bandwidth of approximately 30 MHz for compliance with FCC regulation in a particular region.

Regarding claim **19**, it is rejected for the same reason as set forth in claim 2 above. In addition, since the use of tunable band-pass filter is well known in the art (Official Notice), it would have been obvious to one skilled in the art to modify the above teaching of Odate for providing a tunable (selectable) band-pass filter as claimed, for providing a flexibility capability so that the repeater can be adaptively used in various systems providing different bandwidths.

Regarding claims **27-28, 30-31, 40-45, 53**, the claims are interpreted and rejected for the same reason as set forth in claims 1-2, 4-5, 14-19 above.

2. Claims **3, 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Odate** in view of **Kawano** (US 4,754,495).

Regarding claim **3**, it is rejected for the same reason as set forth in claim 2 above. Although **Odate** fails to disclose the narrow band detector and the controller are shared by the first and second wideband signal paths, such sharing is known in the art as disclosed by **Kawano** by simply using duplexers (see Fig. 3, refs. 3, 4). Therefore, it would have been obvious to one skill in the art to provide the above teaching of Kawano to Odate for utilizing duplexers so that transmission power control of uplink and downlink path be shared by the same detector, comparator and/or amplifier, for cost saving.

Regarding claim **29**, the claim is rejected for the same reason as set forth in claim 3 above.

Allowable Subject Matter

3. Claims 6-13, 20-26, 32-39, 46-52, 54-68 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter:

As to claims 6, 32, 54, the cited prior art fails to disclose or make it obvious a method or apparatus for controlling transmission power of a repeater which comprises steps as specified in the claims, wherein two gain control blocks are adapted to selectively control gains of signals received by the repeater from the first transceiver, and transmitted by the repeater to the second transceiver.

Response to Arguments

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5. Applicant's arguments with respect to claims 1, 27, 53 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Latt (US Pat No. 5,987,304), Repeater with variable bandwidth.

Ogawa (US Pat No. 6,671,502), Control device for radio repeater in communication field.

8. Any response to this final action should be mailed to:

Box A.F.

Commissioner of Patent and Trademarks

Washington, D.C. 20231

or faxed to:

703-872-9314 (for formal communications intended for entry)

(for informal or draft communications, please label PROPOSED or DRAFT)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc M. Nguyen whose telephone number is 703-306-4531. The examiner can normally be reached on Monday-Thursday (9:30 AM – 5:00 PM). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 703-305-4385. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Duc M. Nguyen
June 28, 2004

